



Educators’ Use of Data-Informed Decision Making

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Abstract

Data-driven decision making includes a set of skills that is necessary for educators to make decisions concerning the allocation of teacher time and financial resources. Without these skills teachers do not have the tools necessary to allocate resources in a way that enhances equity and increases student achievement.

Keywords: data-driven decision making, data-based decision making

Purpose

It is important that educators have data-driven decision making skills. Equity in educational outcomes and higher levels of student achievement require this. To increase the level of these skills it is important to have answers to the following research questions:

- 1) What kinds of data do educators use and how are they using it?
- 2) What data-informed decision making skills do educators use to make optimum decisions?
- 3) To what extent can educators be taught to use data-informed decision-making skills, and to retain those skill over time?

Background

A broad array of analytical skills and a sufficient set of quantitative tools is necessary to make substantive decisions. Educators possess the capability to make consequential decisions, but they may lack some of the necessary skills. Additionally, the set of tools they have at their disposal may not include essential quantitative methods. When an educator makes the best decision possible with data, using analytical quantitative methods, they are engaging in data-informed decision making.

Frequently, educators are faced with choices concerning the allocation of available teacher time and financial resources. A concern is whether educators make the most informed choice among alternatives that is in the interest of students. This paper examines the issue of educators' use of data-informed decision making (DIDM). Data-informed decision making occurs when an educator uses data analysis techniques on a sufficiently large quality data set to make optimum decisions concerning alternative uses of teacher time or financial resources. Data-informed decision making includes the ability to model quantitatively and to competently read and understand quantitative research related to an educational issue.

Systems Approach

An educational institution embracing the principles of systems thinking must examine the structures and mental models that are currently affecting its decision making activities and behaviors. In schools, there is quite often a clear distinction between individuals that are involved in data-informed decision making and those that are not. This occurs because of two reasons. Members of the system have a specific role that requires them to use data to make decisions, or they do not. Another reason is the mental models that people in the organization hold. These mental models establish in individuals the belief that they cannot use data-informed decision-making skills, are wary of the conclusions that are arrived at through data analysis, or do not want to use data analysis to support decision making.

Future Directions

Data-informed decision making for the population under study will have to be operationalized. Precisely what skills and behaviors educators engage in constitute data-informed decision making needs to be identified. The level of skills for a sample of the population could be obtained with a survey that gathers categorical, interval and ratio data.

After data-informed decision making is operationalized, a determination of how many educators in the population actually use these skills needs to be made. The categorical factors and levels that determine which subsets of educators use data skills could be determined with a mixed factor Analysis Of Variance (ANOVA).

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